

IN THE CLAIMS:

1. - 8. (Cancelled)

9. (New) A playback apparatus for playing back a digital stream generated by multiplexing a graphics stream and a video stream, wherein

the graphics stream includes one or more interactive control segments and one or more

5 graphics data pieces,

each interactive control segment includes a plurality of sets of page information,

each set of page information includes one or more button information pieces,

each button information piece (i) realizes an interactive screen structure by displaying each graphics data piece as a state of a corresponding graphics button material, and (ii) includes

10 a set command,

the playback apparatus comprises:

a decoding unit obtaining a page including a plurality of graphics button materials by decoding the graphics stream;

a page number register storing therein a page number of a current page;

15 a button number register storing therein a button number of a current button, which is one of the button materials in a selected state on the current page; and

a transition control unit executing a predetermined procedure,

when a selection of one of the button materials on the current page is confirmed, the decoding unit executes a set command that sets a new number in the page number register and/or

20 the button number register, and

the predetermined procedure includes (i) judging whether the button number in the button number register is an invalid button number that does not exist in one of the sets of page information that corresponds to the current page, and (ii) if the button number is the invalid button number, setting the button number register to an alternative button number.

10. (New) The playback apparatus of Claim 9, wherein
the alternative button number is a first number out of valid button numbers in a set of page information that corresponds to the current page.

11. (New) The playback apparatus of Claim 9, wherein
the graphics stream and the video stream have been recorded on a recording medium, and
the transition control unit executes the predetermined procedure after initializing the
5 button number register to an invalid button number that does not exist in any of the sets of page information when the recording medium is loaded to the playback apparatus.

12. (New) A program for causing a computer to execute processing for playing back
a digital stream generated by multiplexing a graphics stream and a video stream, wherein
the graphics stream includes one or more interactive control segments and one or more
5 graphics data pieces,
each interactive control segment includes a plurality of sets of page information,
each set of page information includes one or more button information pieces,

each button information piece (i) realizes an interactive screen structure by displaying each graphics data piece as a state of a corresponding graphics button material, and (ii) includes
10 a set command,

the computer includes (i) a page number register storing therein a page number of a current page, and (ii) a button number register storing therein a button number of a current button, which is one of the button materials in a selected state on the current page,

the program further causes the computer to execute:

15 a decoding step obtaining a page including a plurality of graphics button materials by decoding the graphics stream; and

a transition control step executing a predetermined procedure,

when a selection of one of the button materials on the current page is confirmed, the decoding step causes the computer to execute a set command that sets a new number in the page
20 number register and/or the button number register, and

the predetermined procedure includes (i) judging whether the button number in the button number register is an invalid button number that does not exist in one of the sets of page information that corresponds to the current page, and (ii) if the button number is the invalid button number, setting the button number register to an alternative button number.

13. (New) A playback method for playing back a digital stream generated by multiplexing a graphics stream and a video stream, wherein

the graphics stream includes one or more interactive control segments and one or more
5 graphics data pieces,

each interactive control segment includes a plurality of sets of page information,

each set of page information includes one or more button information pieces,

each button information piece (i) realizes an interactive screen structure by displaying each graphics data piece as a state of a corresponding graphics button material, and (ii) includes

10 a set command,

the playback method executes the following steps (a) and (b) on a computer including (i) a page number register storing therein a page number of a current page, and (ii) a button number register storing therein a button number of a current button, which is one of the button materials in a selected state on the current page:

15 (a) a decoding step obtaining a page including a plurality of graphics button materials by decoding the graphics stream; and

(b) a transition control step executing a predetermined procedure,

when a selection of one of the button materials on the current page is confirmed, the decoding step executes a set command that sets a new number in the page number register and/or

20 the button number register, and

the predetermined procedure includes (i) judging whether the button number in the button number register is an invalid button number that does not exist in one of the sets of page information that corresponds to the current page, and (ii) if the button number is the invalid button number, setting the button number register to an alternative button number.

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